

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

#### LISTING OF CLAIMS

1-75. (Canceled)

76. (Currently Amended) [A] An *in vitro* method of producing human definitive endoderm cells, said method comprising:

obtaining a cell population comprising pluripotent human stem cells; and

providing said cell population with a TGF $\beta$  superfamily growth factor and a ~~Wnt-pathway-activator~~ Wnt family member, thereby generating in said cell population definitive endoderm cells expressing at least SOX17 and HNF3 $\beta$ .

77. (Previously Presented) The method of claim 76 further comprising removing TGF $\beta$  superfamily growth factor from said cell population.

78. (Previously Presented) The method of claim 76, wherein at least 50% of said pluripotent cells differentiate into definitive endoderm cells.

79. (Previously Presented) The method of claim 76, wherein said TGF $\beta$  superfamily growth factor is selected from the group consisting of Nodal, activin A and activin B.

80. (Previously Presented) The method of claim 76, wherein said TGF $\beta$  superfamily growth factor is activin A.

81. (Currently Amended) The method of claim 76, wherein said ~~Wnt-pathway~~ activator Wnt family member is Wnt3a.

82. (Previously Presented) The method of claim 76, wherein at least 10 ng/ml activin A is provided.

83. (Previously Presented) The method of claim 76, wherein at least 100 ng/ml activin A is provided.

84. (Currently Amended) The method of claim 76 further comprising the step of providing serum to said cell population ~~in increasing concentrations~~.

85. (Canceled)

86. (Currently amended) The method of claim 76, wherein said pluripotent stem cells comprise embryonic stem cells.

87. (Previously presented) The method of claim 86, wherein said embryonic stem cells are derived from a tissue selected from the group consisting of the morula, the ICM of an embryo and the gonadal ridges of an embryo.

88. (Canceled)

89. (New) The method of claim 84, wherein providing serum comprises providing increasing concentrations of serum.